CLAIMS

I claim:

1. A System for searching, finding and contacting dates on the Internet in instant messaging networks, comprised of at least the following elements:
    a. A Client program, located on the User's computer;
    b. At least one Server, located on the Internet;
    c. At least one module for filling and/or making changes to a computer dating compatibility questionnaire;
    d. A search module for finding potential dates which can check also if they are currently Online;
    e. At least one of: An ability to search also for dates who are not currently Online, and The ability to search for dates based on reciprocal compatibility;
    f. An instant messaging element which knows if the user is currently Online, and also enables instant exchange of messages between users.

2. The system of claim 1 wherein said system is part of a custom-made instant messaging client, or at least part of the system is an add-on or plug-in, which can be coupled to at least one of the client programs of existing instant messaging networks.

3. The system of claim 1 wherein the filled questionnaire data is saved on at least one of:

    a. Locally on the user's computer,
    b. A dynamic database which contains users' data only as long as they are Online.
    c. A dynamic database which contains users' data only as long as they are Online, but at least the user's unique ID is saved also in a static DB on the server.
    d. A static database on a server on the Internet, and each user's record is marked as Online as long as the user is Online.
    e. A static database on a server on the Internet, and each user's record is marked as Online as long as the user is Online, and the user can search also for persons not currently Online and add them to his contactee list.

    f. The user can be notified immediately at least for some contactees when they become Online.

4. A method for searching, finding and contacting dates on the Internet in instant messaging networks, comprised of at least the following steps:
   a. Using a Client program, located on the User's computer;
   b. Using at least one Server, located on the Internet;
   c. Using at least one module for filling and making changes to a computer dating compatibility questionnaire;
   d. Using a search module for finding potential dates which can check also if they are currently Online;
   e. Using at least one of: An ability to search also for dates who are not currently Online, and The ability to search for dates based on reciprocal compatibility;
   f. Using an instant messaging element which knows if the user is currently On-line, and also enables instant exchange of messages between users.

5. The method of claim 4 wherein said system is part of a custom-made instant messaging client, or at least part of the system is an add-on or plug-in, which can be coupled to at least one of the client programs of existing instant messaging networks.

6. The method of claim 4 wherein the filled questionnaire data is saved on at least one of:

   a. Locally on the user's computer,
   b. A dynamic database which contains users' data only as long as they are Online.
   c. A dynamic database which contains users' data only as long as they are Online, but at least the user's name, e-mail, and unique ID are saved also in a static DB on the server.
   d. A static database on a server on the Internet, and each user's record is marked as Online as long as the user is Online.
   e. A static database on a server on the Internet, and each user's record is marked as Online as long as the user is Online, and the user can search also for persons not currently Online and add them to his contactee list.
   f. The user can be notified immediately at least for some contactees when they become Online.

7. An Online computer dating system wherein the system knows if users are currently online by at least one of:

    a. An integration with an Instant Messaging system, as in claim 2.
    b. For users that gave also an IM id number, the system tries to find out if they are currently Online, and if so, when showing a potential date's data on a dating search results list, the system shows also his/her IM id number, the IM network that it belongs to, and an indication if he/she is Online, so that the user can contact him/her through the appropriate IM client program.
    c. For users that gave also an IM id number, the system tries to find out if they are currently Online through an element that contacts the relevant server.
    d. Being Online can be defined as at least one of: a. A user has logged into the system with his/her user name and password not longer than a certain time ago, b. A user has performed at least 1 activity in the system not longer than a certain time ago. c. The user continues to actively use the browser. d. A user's computer is connected to the Internet and the user is active at the computer.

8. The system of claim 7 wherein at least one of the following elements is added to the contactee list near each contactee: Sex, Age, Area, compatibility scores, Last Date and time of Activity, Most frequent activity hours and/or day parts and/or week days, How often the person is usually Online, Last Communication date with the user, Number of communications so far with the user, and Dating availability Status.

9. The system of claim 8 wherein the contactee list can be sorted by at least one of the elements listed in claim 8, and the sorting order is based on at least one of these elements.

10. The system of claim 7 wherein at least one of the following features exits:

    a. The user can have at least one of the following additional abilities: Knowing how many other users have him/her in their contactee lists, Knowing at least the e-mails of these users, and being able to broadcast messages to them.

b. Whenever a user changes his/her Dating availability Status it is automatically updated in all the contactee lists wherein that user is listed.

c. Each user can also remove himself/herself automatically from all the contactee lists where he/she is listed and/or at least block certain users by at least one of being deleted from their contactee lists and making the system never let them know that the user is online.

11. The system of claim 7 wherein at least one of the following features exist:

a. The user can choose in each search at least one of the following search options: a. Reciprocal compatibility Search based on the self descriptions and preferences and importances in the questionnaires of both the user and the potential dates; b. 1-way compatibility search based at least on the data of preferences and importances of the user's questionnaire; and c. Attribute search, based on marking for the search a small number of attributes that are used as necessary conditions or marked with importances and using at least these preferences.

b. At least in one of the non-reciprocal search options, the user's own self description data is also taken into account at least partially.

c. The user can request and get a list of date-search results that show the most compatible potential dates in descending order of compatibility, and near each potential date is marked if he/she is currently Online, and, if not, at least one of: When was the last time and date he/she was Online, When he/she is most frequently Online, and How often he/she is usually online.

d. In a list of dates with descending order of compatibility, potential dates that are Online are marked by at least one of the group: {Special color, Special shape of text, Special size of text, and Special icon}.

e. Potential dates that are not currently online but were recently Online are marked less conspicuously, and potential dates that are not currently Online and also were not recently online are marked even less conspicuously.

f. The user can request and get a list of date-search results that is divided at least into the following sub-lists and within each sub-list the dates are ordered by descending compatibility scores: A sub-list of currently Online dates, a sub-list of dates that are not currently Online but were recently Online, and a sub-list of dates that are not currently Online and also were not recently Online.

g. The user can request and get a list of date-search results that is divided at least into the following sub-lists and within each sub-list the dates are ordered by descending compatibility scores: A sub-list of currently Online dates, and A sub-list of dates that are not currently Online.

h. If the potential date is not currently Online, the last time and date he/she was online is listed near his/her details.

i. If the user is accessing the server from a Client program on another computer, he/she can still access at least his/her questionnaire data and contactee list from a copy kept on the server, by supplying appropriate password/identification.

j. The user can send instant messages to potential dates who are currently Online and/or enter chat with them.

k. If a user's compatibility scores are generally low beyond a certain criterion, the system can report to the user the list of questions that most contributed to the problem.

l. Each two users of the system can also check the exact compatibility between them.

12. The system of claim 7 wherein at least one of the following features exist:

a. After at least 1 of: {a. A user hasn't been Online for a certain time period, b. A user hasn't been active in the system for a certain time period, and c. Another user submits a form reporting that some user is no longer interested in dating} - the system can generate an automatic message to him/her to ask if he/she is still interested, and if an appropriate reply does not come back after a certain additional time and after at least 1 attempt, the system automatically "freezes" that user until he/she shows activity again.

b. The system disregards reports by other users that some user is no longer interested in dating if at least one of: The user in question has been recently Online, and The user in question has recently performed a dating-search.

13. The system of claim 7 wherein at least one of the following features exist:

a. Everyone must include also his/her phone number so that they can be contacted by phone.

b. If the user does not want his/her phone number exposed to other users without control, he/she can mark his/her phone as "protected", which

means that other users access his/her phone only through the system without knowing the real number, until the user decides to give them the actual number.

c. "Protected phones" can at least one of: Be accessed only at reasonable times that can be defined by the system and/or by the user, Be accessed by each user only a limited number of times, and Be accessed until blocked.

d. When dialing to a protected phone the call is done by at least one of: 1. Direct activation though the client program - if it is done from a cellular phone connected to the Internet, or from a computer with a microphone and sound card, 2.Through phoning a special number and then clicking the code, and the server there automatically routes the call to the real number.

14. The system of claim 7 wherein at least one of the following features exist:

a. In questions of the dating questionnaire where there is a mismatch between the self-description and the preference of the person being matched against, the system can take into account also at least one of: The size of the gap/distance, and The direction of the gap/distance.

b. Matching by area takes into account in addition to the self-areas and desired areas marked by the users, also at least one of: The difference in zip-codes, and The similarity in the first digits of the phone numbers, if both phone numbers being compared are not mobile numbers, in order to further refine the scores.

c. Matching by area takes into account at least the distance in at least one of GPS data and other absolute Geographical coordinates.

15. The system of claim 7 wherein users can be notified automatically whenever someone new fitting at least one criterion has at least one of: {a. Sent his/her data to the system, b. Sent his/her data to the system and is currently Online, c. Performed a compatibility search for the first time}, and said notification is by at least one of: Sending an appropriate e-mail message to the user, Sending an appropriate instant message to the user, Adding the new dates directly into the user's contactee list, Automatic phone call to the user, Sending an SMS message to the user, Adding the new compatible date automatically to the user's contactee list, and Adding the new compatible date automatically to the user's contactee list if the new date is especially important.

16. The system of claim 7 wherein at least one of the following features exist:

   a. Users connected through cellular devices can be notified automatically as soon as someone fitting a certain criterion is close to them below a certain distance, and this distance is known through at least one of: The cell system, Short-range wireless communication between the cellular devices themselves, Geographical coordinates, and Other methods.

   b. The user can request and get at least as one of the search options a list of date-search results that is divided at least into the following sub-lists and within each sub-list the dates are ordered by descending compatibility scores: A sub-list of dates that are in an area close to him/her, and a sub-list of dates that are in an area less close to him/her.

   c. Among users that have cellular devices, at least one of the search option is to put dates that are close to the user according to at least one of: {being in range of short range wireless communication, the info from the cells, and geographical coordinates} in a higher list than dates that are not that close.

   d. The user can request and get at least as one of the search options a list of date-search results in descending order of compatibility, in which dates that are closer to the user are marked more conspicuously.

   e. Users that are connected through cellular devices can initiate a request to check if there are any available dates within range of short distance wireless communication.

   f. Users that are connected through cellular devices can initiate a request to check if there are any available dates within range of short distance wireless communication, and if the person is available and a member in the system, the user can also view at least one of: some background data about him/her, and the appearance data about him/her in order to be able to know if it refers to the person he/she is looking at.

   g. Users that are connected through cellular devices can initiate a request to check if there are any available dates within range of short distance wireless communication, and the user can include screening criteria in advance so that only nearby phones who's users fit the criteria respond to the query.

17. The system of claim 7 wherein a systematic data pool of pictures of males and of females is used so that each user can at least one of: {mark at least 1 picture that is most similar to himself/herself, and mark the pictures of the opposite sex

that he/she most likes}, and the pictures are at least one of: photographs and systematically drawn images.

18. The system of claim 17 wherein at least one of the following features exist:

   a. The pictures are divided at least into facial pictures and body pictures and are marked separately for each category.
   b. At least one of the info from marking the pictures and info from textual questions on appearance is taken into account while calculating the appearance compatibility.
   c. The info from the textual questions on appearance is taken into account while asking the user to mark his/her own appearance and the appearance of the desired dates, in order to increase efficiency and save time.
   d. The user is asked to make choices in a tree-like manner in order to increase efficiency and save time.

19. The system of claim 7 wherein at least one of the following features exist:
   a. The client program is able to work automatically with more than one IM network.
   b. At least one of: The IM client program and The elements in the client program that deal with dating, are an integral part of the browser.
   c. The client program and/or the questionnaire can be updated automatically from the server when needed.

20. The system of claim 7 wherein at least one of the following is done regarding suspect duplicate records:
   a. The system uses at least one of the following methods to try to automatically catch suspect duplicate records: {a. Check if the e-mail starts with at least a very similar name on the left side of the "@"; b. Check if the user name is at least very similar. C. Check if the birth date is at least very similar}.
   b. If a new record is a suspect duplicate, the system checks if other data are also very similar, and then automatically decides if the data is similar enough to decide that it is the same person, and if it is, then the system automatically uses the new data as an update of the older data, and If the system is less sure, then it does at least one of: {a. Ask the user if he/she is indeed the same person, b. Report in to a log for human

decision, c. Warn the user that various sanctions will be taken against people who deliberately try to mislead the system}.

21. In an Online dating system, a method wherein users can be notified automatically when someone new fitting a certain criterion has at least one of: Sent his/her data to the system, Sent his/her data to the system and is currently Online, and Performed a compatibility search for the first time.

22. The system of claim 21 wherein the notification is by at least one of: Sending an appropriate e-mail message to the user, Sending an appropriate instant message to the user, Adding the new dates directly into the user's contactee list, Automatic phone call to the user, and Sending an SMS message to the user.

23. The system of claim 7 wherein the system allows users to send to persons who are currently online instant messages by at least one of:
    a. Displaying messages to the person the next time he/she tries to access pages on the system by generating a page on the fly when the system recognizes by browser cookies that this is the person for whom the message is intended.
    b. Displaying messages to the person by using automatic refresh so the user simply has to leave at least one window of the browser open on the site.

24. The system of claim 23 wherein at least one of the following features exist:

    a. These instant messages can also be used as additional option for the automatic notification about new fitting dates.
    b. The instant messages can also be by automatic refresh of pages.
    c. At least one of Javasrcipt and ActiveX is used to tell the server if the user is still active based on user activities not related to the site.

25. In an Online computer dating service, a method wherein at least one of the following features exist:

    a. Everyone must include also his/her phone number so that they can be contacted by phone.

b. If the user does not want his/her phone number exposed to other users without control, he/she can mark his/her phone as "protected", which means that other users access his/her phone only through the system without knowing the real number, until the user decides to give them the actual number.

c. "Protected phones" can at least one of: Be accessed only at reasonable times that can be defined by the system and/or by the user, Be accessed by each user only a limited number of times, and Be accessed until blocked.

d. When dialing to a protected phone the call is done by at least one of: 1. Direct activation though the client program - if it is done from a cellular phone connected to the Internet, or from a computer with a microphone and sound card, 2.Through phoning a special number and then clicking the code, and the server there automatically routes the call to the real number.

26. In an Online computer dating system, a method wherein the system knows if users are currently online by at least 1 of:

a. An integration with an Instant Messaging method, as in claim 4.

b. For users that gave also an IM id number, the system tries to find out if they are currently Online, and if so, when showing a potential date's data on a dating search results list, the system shows also his/her IM id number, the IM network that it belongs to, and an indication if he/she is Online, so that the user can contact him/her through the appropriate IM client program.

c. For users that gave also an IM id number, the system tries to find out if they are currently Online through an element that contacts the relevant server.

d. Being Online can be defined as at least one of: a. A user has logged into the system with his/her user name and password not longer than a certain time ago, b. A user has performed at least 1 activity in the system not longer than a certain time ago. c. The user continues to actively use the browser. d. A user's computer is connected to the Internet and the user is active at the computer.

27. The method of claim 26 wherein at least one of the following features exist:

a. The user can choose in each search at least one of the following search options: a. Reciprocal compatibility Search based on the self descriptions and preferences and importances in the questionnaires of both the user and the potential dates; b. 1-way compatibility search based at least on the data of preferences and importances of the user's questionnaire; and c. Attribute search, based on marking for the search a small number of attributes that are used as necessary conditions or marked with importances and using at least these preferences.

b. At least in one of the non-reciprocal search options, the user's own self description data is also taken into account at least partially.

c. The user can request and get a list of date-search results that show the most compatible potential dates in descending order of compatibility, and near each potential date is marked if he/she is currently Online, and, if not, at least one of: When was the last time and date he/she was Online, When he/she is most frequently Online, and How often he/she is usually online.

d. In a list of dates with descending order of compatibility, potential dates that are Online are marked by at least one of the group: {Special color, Special shape of text, Special size of text, and Special icon}.

e. Potential dates that are not currently online but were recently Online are marked less conspicuously, and potential dates that are not currently Online and also were not recently online are marked even less conspicuously.

f. The user can request and get a list of date-search results that is divided at least into the following sub-lists and within each sub-list the dates are ordered by descending compatibility scores: A sub-list of currently Online dates, a sub-list of dates that are not currently Online but were recently Online, and a sub-list of dates that are not currently Online and also were not recently Online.

g. The user can request and get a list of date-search results that is divided at least into the following sub-lists and within each sub-list the dates are ordered by descending compatibility scores: A sub-list of currently Online dates, and A sub-list of dates that are not currently Online.

h. If the potential date is not currently Online, the last time and date he/she was online is listed near his/her details.

i. If the user is accessing the server from a Client program on another computer, he/she can still access at least his/her questionnaire data and

contactee list from a copy kept on the server, by supplying appropriate
password/identification.

j. The user can send instant messages to potential dates who are currently
Online and/or enter chat with them.

k. If a user's compatibility scores are generally low beyond a certain
criterion, the system can report to the user the list of questions that most
contributed to the problem.

l. Each two users of the system can also check the exact compatibility
between them..

28. The system of claim 17 wherein at least one of the approximate images and
real photos (when available) can be used to create Virtual Reality
environments where users can "meet".

29. The method of claim 26 wherein a systematic data pool of pictures of males
and of females is used so that each user can at least one of: {mark at least 1
picture that is most similar to himself/herself, and mark the pictures of the
opposite sex that he/she most likes}, and the pictures are at least one of:
photographs and systematically drawn images.

30. The method of claim 29 wherein at least one of the following features exist:

a. The pictures are divided at least into facial pictures and body pictures
and are marked separately for each category.

b. At least one of the info from marking the pictures and info from textual
questions on appearance is taken into account while calculating the
appearance compatibility.

c. The info from the textual questions on appearance is taken into account
while asking the user to mark his/her own appearance and the
appearance of the desired dates, in order to increase efficiency and save
time.

d. The user is asked to make choices in a tree-like manner in order to
increase efficiency and save time.

31. The method of claim 26 wherein the data from the compatibility questionnaires
filled by the users can be used also to create "group compatibility" – which
means creating a group of compatible people.

32. The method of claim 31 wherein at least two of the following steps are used: 1. First at least one individual is chosen that fulfills some required criteria. 2. The computer now finds at least one potential date of the opposite sex highly compatible with the first chosen individuals and adds them to the group. 3. For each of the individuals last added to the group the computer now finds at least one potential date of the opposite sex highly compatible with them (on condition that they are not already in the group) and adds them also to the group. 4. The computer now finds at least one highly compatible dates for each of the recently added individuals, then for the newly added opposite sex individuals, and so on, until the required group size has been reached.

33. The method of claim 32 wherein when finding the highly compatible date or dates for each newly added member, the computer at least one of:
    a. Takes each time the next most compatible dates for that person.
    b. Takes into consideration also how compatible the new candidate is with the other members of the opposite sex that are already in the group

34. The system of claim 16 wherein the cellular device uses at least one of compass orientation and GPS info about its own position and the position of the potential date in order to point the user more exactly to the location of the potential date.

35. The system of claim 7 wherein users are also allowed to define "OR" relations between various questions, so that it is sufficient that potential dates fulfill the requirements in one of the questions in the group of questions for which the "OR" relation is applied.

36. The system of claim 35 wherein the "OR" and "AND" are combined, so that fulfilling more than one of the questions in the "OR" group adds a bonus to the compatibility score.

37. The system of claim 7 wherein users are also allowed to define "IF" relations between various questions, so that if certain conditions are met in at least one question, requirements can be changed in at least one other question.

38. The system of claim 7 wherein when the user makes changes in one or more questions, he/she is immediately allowed by the system to see an indication of the direction and extent of the change in results that this will cause.

39. The system of claim 38 wherein said indication is done efficiently as an estimate by using general statistics of the answers by the opposite sex members to each question together with an estimate of the amount of drop or increase in scores that each level of importance marked by the user typically causes.

40. The system of claim 7 wherein the user is allowed to request and view a list of all the questions that had most effect on at least one of lowering or adding to the compatibility scores, and this list is shown in at least one of descending order of magnitude and descending order of importance, and other order.

41. The system of claim 7 wherein two users can request a detailed analysis of the specific compatibility between them.

42. The system of claim 41 wherein said detailed analysis can include at least one of: the lists of questions that most contributed to or reduced their compatibility scores, a display of the level of matching on each question, and the serial position of each of the two persons on the other person's list

43. The system of claim 42 wherein at least one of:
    a. The lists of questions are ordered in at least one of: the original order of the questionnaire, sorted in descending order of importance, sorted in descending order of matching, or sorted in descending order of effect on the compatibility scores.
    b. The lists of questions are at least one of: separate for showing the 1-way matching to the first person and for the opposite 1-way match, and combined, so that the questions are listed only once.

44. The system of claim 7 wherein the user's answers are automatically analyzed during filling the questionnaire, in order to check the quality of his/her answers, and at least one of the user's differentiation, consistency, and coherence can be automatically analyzed.

45. The system of claim 44 wherein the user is given feedback if the answers are not reasonable enough, at least one of: during the filling process, after he/she has finished it, and at least after various stages have been completed.

46. The system claim 7 wherein for determining if the user is still Online without having to send short message every certain interval, at least one of the following methods is used:

    a. The client software creates a hook or interface with the communication software and/or with the routines that are activated when the OS (Operating System) is shut down so that when the user closes the client software and/or the Internet connection and/or shuts down properly the OS, the client software can still first send to the IM server a message that the user has logout out, before letting the connection to actually be closed.

    b. The IM server is automatically informed by other IM clients if they try to reach a client that is considered Online but don't succeed and thus the IM server can assume that that IM client is no longer Online.

    c. If the IM server does not succeed in communicating with a client, the server can assume that the client is no longer Online.

    d. If the server and/or other clients receive communications from a client that was considered to be offline, the receiving clients report it to the server and the server updates its status to Online.

47. The system of claim 7 wherein when dealing with people not currently Online the system automatically tries to come up with a list of most compatible dates who are most recent, and if the scores are not high enough and/or the list is not long enough, the system automatically decides to create instead a list containing also people who are less recent and so on in one or more steps, until the list is long enough and/or the scores are high enough and/or the recency compromise has reached backwards enough.

48. The system of claim 7 wherein if the user did not answer some questions, the system handles the missing values by at least one of:

    a. Taking into account the average or most frequent answers in each question that the user did not answer.

    b. Taking into account also the correlations of each missing answer with other answers

    c. Giving a lower score for matching on missing values, in a way that reflects the uncertainty.

49. The system of claim 17 wherein when there is no direct match between the marked self image of the date and the user's marked preferences in these

images, or vice versa, the system takes into account also the distance or similarity between the preferred images and the actual image, and at least one of the following features exists:

    a. Said distance or similarity analysis is based on systematic classification of the images according to various variables.

    b. Said actual image is the image or images that were marked by the other person as most similar to himself/herself.

    c. The relevant parameters of each image are coded in advance as numeric data so that no actual image analysis is done during the compatibility search.

    d. If the date submitted also an actual photo then the analysis of distance or similarity can be done in addition or instead also on the actual photo.

50. The system of claim 7 wherein if the user browses through photos of actual opposite sex users, he/she can request to view photos that are similar to one or more photos that he likes and then the system automatically shows him those photos, and/or this is used as one of the criteria for the automatic matching.

51. The system of claim 50 wherein the photos of actual users are automatically analyzed in advance after the user submits it according to various parameters in order to convert it into numerical codes, so that during the actual compatibility search and/or during searching for similar photos only these numerical codes are used.

52. The system of claim 17 wherein at least one of the following features exists:

    a. The user can request to browse photos of actual users that are similar to any of the systematic photos that the user marked as desirable.

    b. If a user submits an actual photo this photo can be automatically analyzed in order to correct the estimate that the user gave about how similar he is to photos of the systematic pool of images

53. The system of claim 7 wherein the mark that indicates if someone is currently online and/or the availability status of each date is automatically updated also on the list of compatible dates at least if the user saves the list or keeps the window of the list open, like in the automatic updating of the contactee list.

54. The system of claim 7 wherein dynamic web pages are used and for updating the online status of dates on the results list and/or for faster instant messaging through the browser at least one of the following features is used:
    a. The refresh command is initiated automatically by the site when there is any change in the page, so that the browser can get a refresh even if it didn't ask for it.
    b. The browser asks for refresh more often, but if nothing has changed then the browser gets just a code that tells it to keep the current page or window as is.
    c. When the refresh is sent, it is a smart refresh, which tells the browser only what to change on the page instead of having to send the entire page again.

55. The system of claim 15 wherein instead of sending the notification as soon as possible after the new date becomes available, the system waits until one or more such highly compatible dates become available and if they do then the message is sent immediately, otherwise the system waits a certain time limit, and if no additional highly compatible dates that meet the criteria become available, then the message is sent anyway.